

Zhenglang Weng

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EDUCATION

University of Science and Technology of China (USTC)

School of the Gifted Young, Senior Year

Hefei, Anhui, China

Sep. 2022 – Present

- **Major:** Electronic Information Engineering **Overall GPA:** 4.03/4.3 **Ranking:** 1/149
- **Relevant Courses:** Digital Signal Processing (97), Signal and System (92), Electrodynamics (98), Linear Algebra (95), Equations of Mathematical Physics A (96) , Statistical Signal Analysis and Processing (95)
- **Standardized Test:** TOEFL: 111 (Reading: 30, Listening: 30, Speaking: 23, Writing: 28)

PUBLICATION

- [1] Jianshu Zhou, Junda Huang, Honghao Guo, **Zhenglang Weng**, Boyuan Liang, Ian Zhang, Qiguang He*, Masayoshi Tomizuka*, *Embodied Origami Robots: Bridging Physical and Computational Intelligence for Adaptive Manipulation and Locomotion*, Submitted to Advanced Science.
- [2] Yifan Zou, Matthew Jeung, **Zhenglang Weng**, Willa Yunqi Yang, Ken Nakagaki*, *TorquePods: Multi-Module Coordinated Flywheel-based Haptic Toolkit for Advanced Haptic Design*, Submitted to CHI.
- [3] Jiawen Yao, Yifan Zou, Alan Pham, **Zhenglang Weng**, Chi Wang, Liang He, Ken Nakagaki*, *Mass.mov: Towards Movement-based Interactive Material using ‘Mass with Constraints’*, Submitted to CHI.

PROJECT EXPERIENCES

Multi-Module Coordinated Flywheel-based Haptic Toolkit for Advanced Haptic Design

Advisor: Prof. Ken Nakagaki

Jul. ~ Aug. 2025

- Elaborated a compact, custom PCB for a novel modular haptic interface system based on flywheel actuation.
- Implemented Bluetooth communication protocol for low-latency control of the module.
- Derived theoretical force-torque transformation formulas and implemented real-time measurement for technical evaluation using a 6-DOF Force/Torque sensor.

Wordle Game Solving Algorithm Utilizing Information Theory

Advisor: Prof. Chen Gong

May. ~ Jul. 2025

- Formed rigorous mathematical formulations of the rules and game-solving Algorithm.
- Designed a Wordle game solver based on information entropy.
- Formulated a functional explanation for the Kullback-Leibler Divergence (KL Divergence).

HONORS AND AWARDS

Outstanding Undergraduate Scholarship-Gold Prize (Top 3%)

Nov. 2024

Scholarship Issued by JAC&NIO Enterprise (Top 2%) | USTC

Nov. 2023

CUMCM¹ (1st in Anhui Province, Second Prize National) | China

Dec. 2023

Robogame Robot Championship (Second Prize) | USTC

Nov. 2023

TEACHING EXPERIENCES

Teaching Assistant for Computer Programming A

Fall, 2024

- Assisted in the teaching of the C programming language. Thoroughly reviewed various uses of pointers in C.
- Utilized an online openjudge platform to facilitate program assessments.

SKILLS

Programming Language: C, C++, MATLAB, Python, Verilog HDL

Software: Sketchpad, GeoGebra, Mathematica, SolidWorks, Altium Designer, Fusion360, Markdown, LaTeX

Hardware: Heat gun, Soldering station, Bambu Lab, PPG, EDFA, Optical Attenuator, Optical Fibre

¹Contemporary Undergraduate Mathematical Contest in Modeling